

ABSTRACT

A multi-tiered lookup table is used to progressively map a virtual address to a specific control word that facilitates resolution of the virtual address for a translation lookaside buffer (TLB) miss. In one embodiment, the control word has a compressed and efficiently encoded image of the TLB hardware register data. The control word is accessed with or without a level of indirection in various embodiments. In some embodiments, the control word provides all information needed to decode the majority of memory blocks, or points to a third level for special blocks.

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